Dixon, Mark and Scutt, Polly and Appleton, Jason P. and Spaight, Robert and Johnson, Roderick and Siriwardena, A. Niroshan and Bath, Philip M.W. (2018) Interim analysis of ambulance logistics and timings in patients recruited into the Rapid intervention with Glyceryl trinitrate in Hypertensive stroke Trial-2 (RIGHT-2). In: 12th UK Stroke Forum Conference (UKSF 2017), 28-30 Nov 2017, Liverpool, UK.

Interim analysis of ambulance logistics and timings in patients recruited into the Rapid intervention with Glyceryl trinitrate in Hypertensive stroke Trial-2 (RIGHT-2)

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Introduction: Stroke is a severe condition with high morbidity and mortality. Despite treatment effects in acute stroke being predominantly time dependent (e.g. thrombolysis and thrombectomy), proven treatments are hospital based and require prior brain scanning to identify intracerebral haemorrhage. Commencing treatment in the ambulance could dramatically reduce time to treatment.

Methods: The rapid intervention with glyceryl trinitrate in hypertensive stroke trial-2 (RIGHT-2) is a multicentre prospective randomised single-blind blinded-endpoint parallel group trial assessing the safety and efficacy of ambulance-based, paramedic-delivered glyceryl trinitrate (GTN) when administered within 4 hours of stroke onset. Paramedics trained in RIGHT-2 procedures assess, take appropriate consent and enrol eligible FAST-positive patients and apply the first of four GTN or sham transdermal patches that are continued during hospital admission. Timings, vital signs and distances are recorded.

Results: 563 participants enrolled across seven UK NHS ambulance services were assessed in this interim analysis. Median [interquartile range] timings in minutes were: symptom onset to 999 call 16 [5, 56], call-dispatch 2 [1, 5], onset-randomisation 64 [41, 105], arrive scene-randomisation 21 [14, 31] with no difference between participants scoring FAST 2 or 3, scene-departure 31 [25, 40]), departure-hospital 16 [10, 24]. All timings were comparable to a cohort of 49 stroke patients across East Midlands Ambulance Service who were not enrolled in to RIGHT-2, e.g. scene-departure 32 [23, 40].

Conclusions: Randomisation of participants to an ambulance-based stroke trial is possible. Paramedics can rapidly identify eligible patients, gain appropriate consent, randomise and commence treatment en route to hospital without prolonging time spent on scene.